

Date: Monday, 22/09/2008 2:09:31 PM  
User: Julie Lecocq

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services  
Job Number : 42198  
Estimate Number : 13452  
P.O. Number :  
This Issue : 22/09/2008 S.O. No. :  
Prsht Rev. : NC  
First Issue : // Type : SMALL /MED FAB  
Previous Run : 40270  
Written By :  
Checked & Approved By : JLD 08.9.22  
Comment : Est Rev:A New Issue 08.07.03 EC verified by:LL  
Est Rev:B 08-09-10 add D3121-143 & remove 1 D3121-144 DD  
verified by:JLM

Drawing Name : HINGE PANEL ROLLER KIT  
Part Number : D412698025  
Drawing Number : DSI9409 REV A  
Project Number : N/A  
Drawing Revision : A  
Material :  
Due Date : 20/10/2008 Qty: 22 Um: Each

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0

DC

DOCUMENT CONTROL



*HJ for JLD 08/10/08*



Comment: DOCUMENT CONTROL

Photocopy bluefile &amp; type labels per PPP

*D412-698.025*  
*DSI9409* CHG001

*5 09/01/22*

2.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

3.0

D3121144

Bracket Assembly



*1340344*

*1342191*



*50*

Comment: Qty.: 1.0000 Each(s)/Unit Total: 22.0000 Each(s)

Bracket Assembly

4.0

D3121143

Bracket Assembly



*4*

*1342190*



*50*

Comment: Qty.: 1.0000 Each(s)/Unit Total: 22.0000 Each(s)

Bracket Assembly

batch: *1340343*

5.0

D32383

Plate



*1342229*



*22x*

Comment: Qty.: 2.0000 Each(s)/Unit Total: 44.0000 Each(s)

Plate

*8/12/14*

*50*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 22/09/2008 2:09:31 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HINGE PANEL ROLLER KIT

Job Number: 42198

Part Number: D412698025

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0 D323813

Plate



B42227



(22x)

Comment: Qty.: 4.0000 Each(s)/Unit Total: 88.0000 Each(s)

Plate

8/12/14

SP

7.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



counter

Comment: INSPECT 100% KITS FOR COMPLETENESS

(22x)

09/01/27

(22)

8.0

PACKAGING 1

PACKAGING RESOURCE #1



9/1/26 SP

Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D412-698-031

Location: \_\_\_\_\_

PPP Rev: \_\_\_\_\_

Rev A

SS 09/01/23

(22)

9.0

QC21

FINAL INSPECTION/W/O RELEASE



09/01/27

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



u 09/01/27

(22x)

D3675-3

B 44875 \* 32

SS 09/01/23 (22x)

per ECN 45062 x 24 no good wrong thickness

OMIT

SS 09/01/23

B45062 x 24

B45219

(12)

9/1/26

SP

1x D3202-5

B

45213

SS 09/01/27 (22)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

## 7.0 PARTS LIST - PILOT DOOR MODIFICATION KITS

Qty -015	Qty -023	Part Number	Description
X		D412-698-015	DOOR SUPPORT KIT
	X	D412-698-023	AUTOMATIC DOOR OPENER KIT
2		D3200-1	DOOR POST BLOCK
2		D3200-3	DOOR WEDGE
2		D3201-1	DOUBLER
1		D3201-3	ANGLE
1		D3201-4	ANGLE
	1	D3552-11	GAS SPRING
	1	D3594-5	DOOR DOUBLER
	1	D3594-043	FLOOR DOUBLER ASSEMBLY, LH
	1	D3594-044	FLOOR DOUBLER ASSEMBLY, RH
	2	D3622-1	BALL STUD
	1	MS21073L5	ANCHOR NUT
	2	MS20426AD4-4	RIVET
12		AN960JD10L	WASHER
	2	AN960JD516L	WASHER
12		MS21042L3	NUT (OR MS21042-3)
12		MS24693-S277	SCREW

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**8.0 PARTS LIST - CABIN DOOR MODIFICATION KITS**

(FOR AIRCRAFT EQUIPPED WITH P/N 412-030-300-XXX COMPOSITE DOORS)

Qty -019	Qty -021	Qty -031	Qty -032	Qty -033	Qty -035	Part Number	Description
X						D412-698-019	BEARING OVERHAUL KIT
	X					D412-698-021	REPLACEMENT SHIM KIT
		X				D412-698-031	CABIN DOOR ROLLER KIT, LH
			X			D412-698-032	CABIN DOOR ROLLER KIT, RH
				X		D412-698-033	REPLACEMENT DOOR TRACK KIT
					X	D412-698-035	DOOR HANDLE KIT
7						D3121-21	BOLT
5						D3121-241	BEARING ASSEMBLY
1						D3137-3	GUIDE
1						D3137-5	WASHER
2						D3183-045	BEARING ASSEMBLY
	3					D3238-1	SHIM
	1					D3238-3	SHIM
	2					D3238-5	SHIM
	6					D3238-11	SHIM
	2					D3238-13	SHIM
	4					D3238-15	SHIM
		1				D3121-143	BRACKET ASSEMBLY
			1			D3121-144	BRACKET ASSEMBLY
		1	1			D3137-043	BRACKET ASSEMBLY
		1				D3183-043	BRACKET ASSEMBLY
			1			D3183-044	BRACKET ASSEMBLY
		1	1	1		D3202-3	COVER
		3	3			D3674-041	BRACKET ASSEMBLY
		9	9	9		D3675-1	BRACKET
					2	D3779-041	HANDLE ASSEMBLY
					2	D3779-3	PLATE
					2	D3779-043	HANDLE ASSEMBLY
					12	AN525-832R8	SCREW
					12	AN960JD10L	WASHER
					12	MS21042L3	NUT
					12	MS24694-S58	SCREW
1						MS24694-S101	SCREW

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Revision: E  
 Date: 08.05.01

# DART SERVICE INSTRUCTION

SUPPLEMENTAL TO INSTALLATION INSTRUCTIONS IIN-D412-698 REV. E &  
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D412-698 REV. 5  
(REF. TCCA STC SH92-43, FAA STC SR01446NY & EASA STC EASA.IM.R.S.00709)

## PURPOSE

THE PURPOSE OF THE D412-698-025 KIT IS TO ALLOW OPERATORS THAT HAVE PERFORMED THE BELL/AUGUSTA SERVICE INSTRUCTION TA212-138/2-22B TO THE LH/RH CABIN DOORS TO REPLACE THE EXISTING P/N 205-031-435-001 & 205-031-435-002 ROLLERS WITH DART P/N D3121-143 & D3121-144 ROLLERS. THIS KIT ALSO REPLACES THE EXISTING DOOR TRACK WITH SEGMENTED "J" BRACKETS DART P/N D3675-3 (SEE FIGURE 3 FOR THE LOCATION OF BOTH CHANGES).

THERE IS A NEGLIGIBLE WEIGHT CHANGE ASSOCIATED WITH THIS MODIFICATION.

**REFERENCE ONLY**



## PROCEDURE

- 1.) REMOVE HINGE PANEL DOOR PER AIRCRAFT MAINTENANCE MANUAL.
- 2.) REMOVE BELL P/N 205-031-435-001 AND 205-031-435-002 ROLLERS. RETAIN HARDWARE IF AIRWORTHY.
- 3.) REMOVE THE BELL/AUGUSTA DOOR TRACK. RETAIN HARDWARE IF AIRWORTHY.
- 4.) INSTALL DART P/N D3121-143 & D3121-144 USING EXISTING HARDWARE AND SHIMS IF AIRWORTHY. REPLACE EXISTING BELL SHIMS IF NO LONGER AIRWORTHY WITH WITH DART P/N D3238-3/13 AS REQUIRED (SEE FIGURE 1). TORQUE FASTENERS PER AIRCRAFT MAINTENANCE MANUAL.
- 5.) INSTALL THE DART P/N D3675-3 SLIDING DOOR BRACKETS ("J" BRACKETS) & THE D3202-5 COVER, PER FIGURE 2 USING EXISTING HARDWARE. TORQUE FASTENERS PER AIRCRAFT MAINTENANCE MANUAL.
- 6.) RE-INSTALL MODIFIED DOOR ON AIRCRAFT PER AIRCRAFT MAINTENANCE MANUAL.
- 7.) CHECK SLIDING OPERATION OF DOOR. ADJUST POSITION/SHIMMING OF ALL NEW BRACKETS UNTIL DOOR OPERATION IS SMOOTH AND FREE OF DRAGGING/BINDING THROUGH FULL TRAVEL OF DOOR. RE-TORQUE ALL FASTENERS PER AIRCRAFT MAINTENANCE MANUAL.

**NOTE:** ENSURE VERTICAL ROLLERS ARE SITTING FLUSH TO THE DOOR TRACKS TO PREVENT ROLLER WEAR AND PREMATURE DOOR TRACK WEAR.

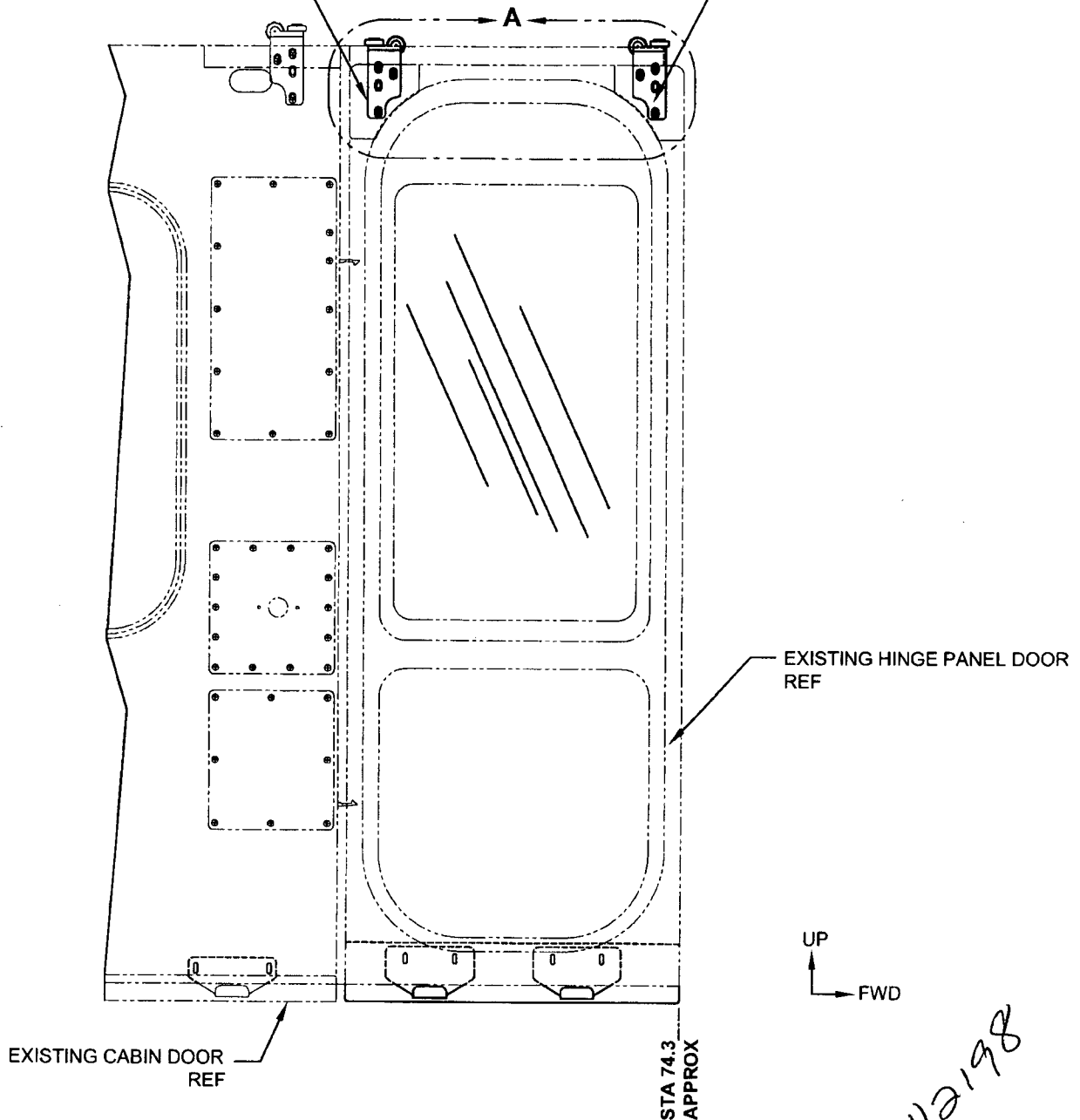
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CANADA DEPARTMENT OF TRANSPORT AIRCRAFT CERTIFICATION BRANCH DAO # 01-O-01	
APPROVED	
BY:	
D. SHEPHERD (DE # 02)	
DATE:	08.11.04
CERT. NO.:	SH92-43
ISSUE NO.:	5

B	ADD D3202-5 & D3675-3 & (COVER & "J" BRACKETS) CUSTOMER REQUEST TO REPLACE BELL/AUGUSTA MOD PARTS.	AJS	08.11.04
A	NEW ISSUE	AJS	08.07.02
REV.	DESCRIPTION	BY	DATE
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MFG. APPR.	N/A	DSI 9409	SHEET 1 OF 5
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D3121-144 BRACKET ASSEMBLY

D3121-143 BRACKET ASSEMBLY






**FIGURE 1. D412-698-025 HINGE PANEL DOOR ROLLER KIT**  
(VIEW OF L/H HINGE PANEL DOOR LOOKING OUTBOARD, R/H DOOR OPPOSITE)

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AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

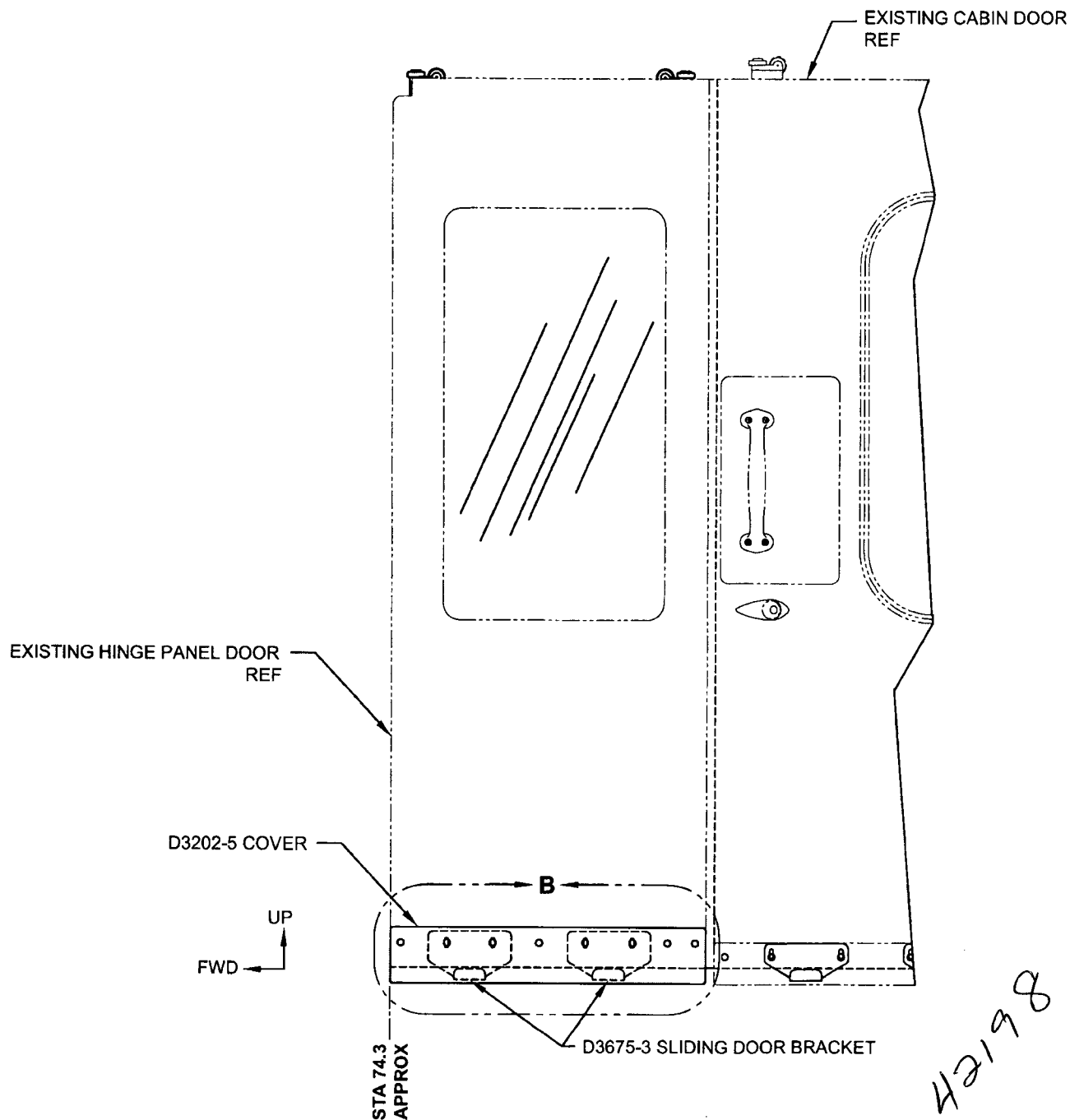
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**FIGURE 2. D412-698-025 HINGE PANEL DOOR ROLLER KIT**  
(VIEW OF L/H HINGE PANEL DOOR LOOKING INBOARD, R/H DOOR OPPOSITE)

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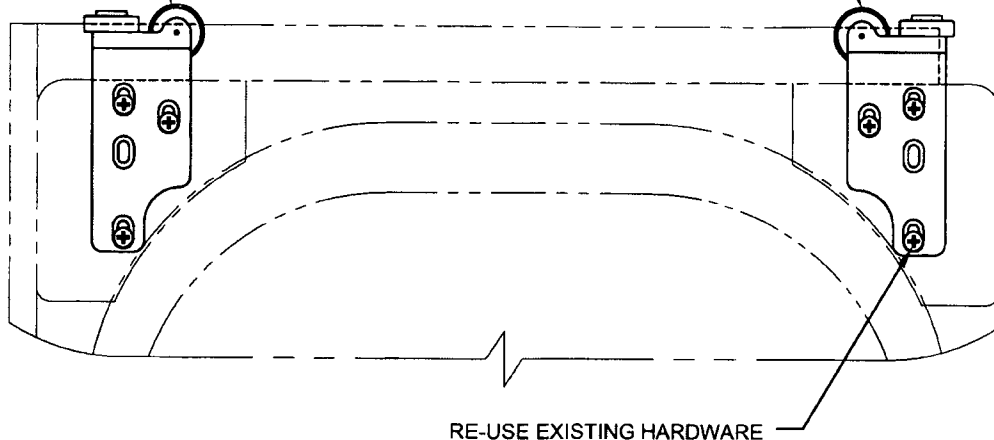
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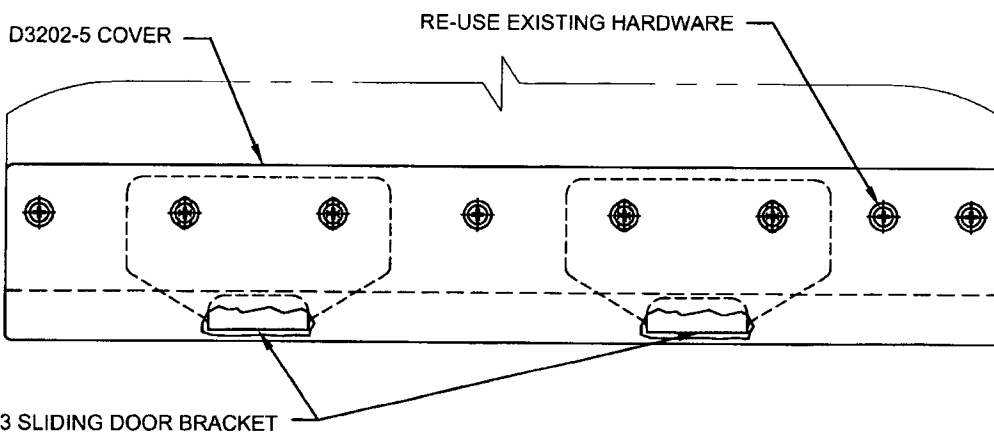
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(1) D3121-144 BRACKET ASSEMBLY REF  
 (1) D3238-3 SHIM (AS REQUIRED)  
 (1) D3238-13 SHIM (AS REQUIRED)  
 LOCATE FROM EXISTING  
 FASTENER HOLES

(1) D3121-143 BRACKET ASSEMBLY REF  
 (1) D3238-3 SHIM (AS REQUIRED)  
 (1) D3238-13 SHIM (AS REQUIRED)  
 LOCATE FROM EXISTING  
 FASTENER HOLES



**DETAIL A VIEW ON L/H HINGE PANEL DOOR (LOOKING OUTBOARD)**  
 (RH DOOR OPPOSITE)



**DETAIL B VIEW ON L/H HINGE PANEL DOOR (LOOKING INBOARD)**  
 (RH DOOR OPPOSITE)

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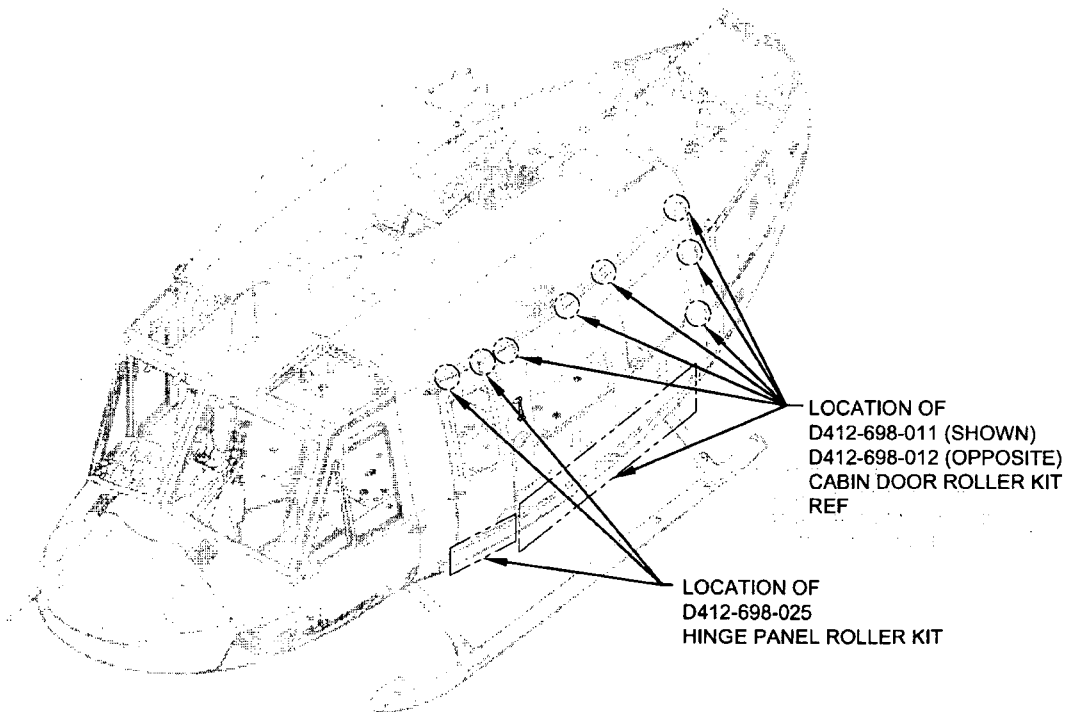
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42198



**FIGURE 3. LOCATION OF D412-698-025 HINGE PANEL ROLLER KIT**  
(D412-698-011/-012 SHOWN FOR REFERENCE ONLY)

**TABLE 1. PARTS LIST FOR D412-698-025**

QTY -025	PART NUMBER	DESCRIPTION
X	PART NUMBER	HINGE PANEL DOOR ROLLER KIT (FITS L/H OR R/H DOOR)
1	D3121-143	BRACKET ASSEMBLY
1	D3121-144	BRACKET ASSEMBLY
1	D3202-5	COVER
2	D3238-3	SHIM
4	D3238-13	SHIM
2	D3675-3	SLIDING DOOR BRACKET

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AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

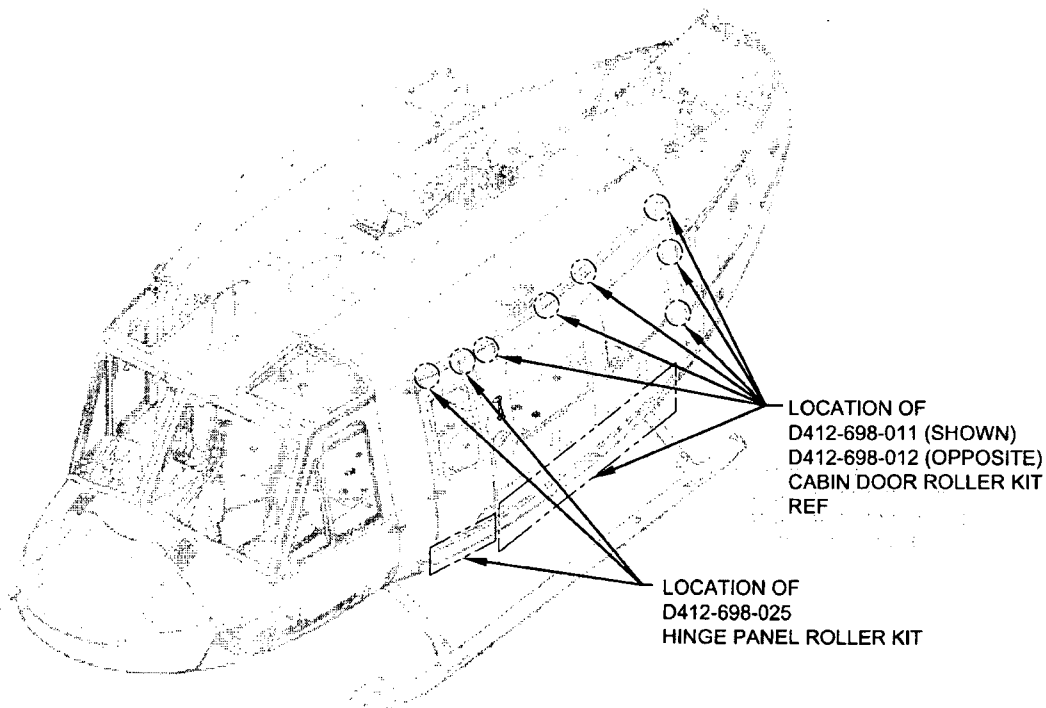
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ISSUE NO.: 5

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CHECKED	A	DRAWING NO. REV. B
MFG. APPR.	N/A	DSI 9409 SHEET 5 OF 5
APPROVED	MPO	TITLE SCALE
DE APPR.	H	HINGE PANEL ROLLER KIT NTS
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**FIGURE 3. LOCATION OF D412-698-025 HINGE PANEL ROLLER KIT**  
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1	D3121-144	BRACKET ASSEMBLY
1	D3202-5	COVER
2	D3238-3	SHIM
4	D3238-13	SHIM
2	D3675-3	SLIDING DOOR BRACKET

REFERENCE ONLY

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BRANCH  
DAO # 01-O-01

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MFG. APPR.	N/A	DSI 9409 SHEET 5 OF 5
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